

TSUNAMI ACTIVITIES MATRIX
National Tsunami Mitigation Program Subcommittee
April 14, 1998 Meeting
Chris Jonientz-Trisler, Coordinator

	ALASKA	CALIFORNIA	HAWAII	OREGON	WASHINGTON
State Reps	Mike Webb	Rich Eisner, EMD Lori Dengler	Brian Yanagi, EMD Gus Furumoto	Mark Darienzo, EMD	George Crawford, EMD Tim Walsh
Public Info Materials	Public Info Materials	Public Info Materials	Public Info Materials	Public Info Materials	Public Info Materials
Web Pages	In development	developed site to post state/local work group minutes, products, activities	several exist		under development
Evacuation & Educational Signage	procedure in progress to enable installation	developed signs based on Oregon's, now trying to get support to convince Caltrans to post signage - currently unable	In existence on street (evacuation route, all hazards)	Evac and educational signs continue being posted.	Evacuation signs posted, more planned
Media Materials			inventory cancelled	Brochure, bookmarks	
Public Info Products	Brochure exists from 1980s	Brochure developed based on Oregon's. Interpretive programs planned for parks.	Phone book evacuation and safe area maps and instructions exist. State publishes.	Brochure developed in 1990s. Coffee mugs with tsunami logo and tips. Bookmarks, place cards.	Brochure based on California's developed and available where warning signs exist, distributed to hotels. Interpretive signage.
Public Service Announcements			Emergency broadcasts/sirens. Evacuation maps in phone books.		

State Videos			A few	One by OGI and G. Priest. One by Cannon Beach Schools.	
Educational Programs	Educational Programs	Educational Programs	Educational Programs	Educational Programs	Educational Programs
Curriculum Materials			Several	Curriculum activities for K-8 under development.	
Library-type Materials Inventory					
Training Materials and Audiences			Holds exercises.		Recent table top exercise included tsunami.
Public Education				Held dedication ceremonies for several more sign installation sites.	Sending out brochures. Developing ideas to provide materials to hotels/video stores.
Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment
Counties & Communities' Needs Assessment	Needs assessment info coming from updated survey and community meetings with local officials.	Conference and meetings used to determine recommendations, build constituencies. Recommendations document published following conference.	Drafted Position Paper with recommendations for such things as "Improve forecasting of wave heights on shore."	Finished overall assessment with counties. Will continue to work for priorities.	

Surveys	20-year-old survey exists. Currently surveying about 100 communities for baseline and developing update assessment.	Regional Federal survey done with North Coast responders regarding vulnerability and readiness, 1994.	Historical data: 5 tsunami events.	Regional Federal survey of responders regarding vulnerability and readiness, 1994. Repeating 1997 State Survey done for schools regarding tsunami curriculum and evacuation drills in 1994 and 1997. State inventory of critical facilities done for 47 communities to assess vulnerability.	Regional Federal survey done with responders regarding vulnerability and readiness, 1994.
State/Local/Fed Group	Blue Ribbon Oversight Committee formed to ground-truth data for inundation mapping and meet with local officials to provide type of mapping solutions needed locally. Met with locals in Sitka and Kodiak on issues.	Redwood Coast Tsunami Work Group is a partnership with locals to assess needs and priorities.	Ongoing relationships, new Hawaii Tsunami Group. County level meetings with State and Federal.	State/Local Tsunami Work Group forming to address needs and input from locals.	State/Local Tsunami Mitigation Work Group continues to meet and develop activities and products.
Coastal Jurisdiction Contact	Held meetings in Sitka, Kodiak.	Held conference.	Exist, ongoing.	Planning 2 coastal workshops.	Held several meetings and workshops.

[illegible]

				<p>Developed school certification program to assist schools in developing tsunami plans and evac routes.</p> <p>Working with hotel/motel associations to put materials for guests into rooms.</p>	
1997 Activities	1997 Activities	1997 Activities	1997 Activities	1997 Activities	1997 Activities
1997 Activities	<p>Meetings held to form advisory group for mapping and mitigation efforts. Began update of 20-year-old community survey/risk assessment. Assembling data sets/resources for mapping. Building web page. Exploring sign installation.</p>	<p>Held conference for Redwood Coast Tsunami Work Group. Developed brochure, web site, signs. Published mitigation recommendations document.</p>	<p>Regular meeting county level, state level, state-federal liaison. Drafted Position Paper on Tsunami Issues with priority recommendations.</p>	<p>TIME opened. Developed brochure, bookmark, mugs, hotel/motel materials for public. Forming State/Local partnership. Updated shcool survey to measure progress. Developed school certification program to assist schools with plans/evac routes. Working with motel/hotel associations. Working on tsunami curriculum. Inventoried needs with counties.</p>	<p>Meetings of State/Local/Fed Work Group held to identify local priorities and move forward on signage and brochures. Building web page. Developed brochure, ideas to provide materials to hotels and video stores. Installed signs. Held table top exercise.</p>

1998 Planned Activities	1998 Planned Activities	1998 Planned Activities	1998 Planned Activities	1998 Planned Activities	1998 Planned Activities
1998 Planned Activities	Finalize in-depth survey of 100 communities, develop needs assessment for each and baseline for future work.	Develop guidance for local governments for use of inundation maps and development of evac maps/procedures.	Raise awareness through production of video, reprint of depleted pubs, and support of existing outreach programs of various groups. Support meetings of Hawaii Tsunami Group which provides guidance.	Continue development of State/Local Tsunami Group to include diverse interests. Develop 2 workshops to gather local input and better assess needs/priorities. Work with schools for appropriate evac/destination routes. Continue development/printing of multi-use materials. Print inundation maps for Astoria, Warrenton, Seaside in color.	Support State/Local Tsunami Group. Continue installation of interpretive and evac signs. Support installation of indoor signs in hotels, schools, tourist sites. Coordinate workshops for local officials, businesses, utilities regarding mapping, signage, mitigation. Continue development of educational materials for businesses, schools, residents. Continue development of local county web page including State/Local Work Group meeting minutes, updates to evacuation routes/procedures.

Report from the Tsunami Hazard Mitigation Subcommittee of the National Tsunami Hazard Mitigation Program

April 14, 1998

Participants

Coordinator - Chris Jonientz-Trisler, FEMA

Alaska - Mike Webb

California - Lori Dengler

Hawaii - Brian Yanagi, Gus Furumoto

Oregon - Mark Darienzo, Don Hull, Angie Karel

Washington - George Crawford, Tim Walsh

Funding Status

FEMA initiated paperwork to transfer 1998 funds to States upon receipt of program funds from NOAA. States are going through the application process and funds should arrive very soon to the States.

Statements of Work for FY 98

State Activities

Only two written State reports were provided prior to this meeting so the [Tsunami Activities Matrix](#) requires another update shortly after this meeting. (Update version dated April 10, 1998 is provided for this meeting.)

What Has Changed in the States Due to the National Tsunami Hazard Mitigation Program?

Tsunami issues are currently "on the screen" in lots of venues. A synergism of multi-state effort

exists. We know the questions to ask now and have a much better assessment of our needs.

- Alaska - Flagging interest in tsunami has been revived. Phone trees are up-to-date. Things are being incorporated. DOT is involved at a basic level. PIOs are interested in educating corporations on watch/warnings. Alaska has more community plans now.
- California - Many direct activities happened due to the earthquake activity in the Cape Mendocino area. But the Tsunami Program has significantly helped foster communication between communities on these issues, i.e., improved the tsunami mitigation infrastructure.
- Hawaii - The seismic network has been upgraded. There is increased communication between PTWC and WC/ATWC. When the deep-water buoy system is working properly, it is expected to help reduce "false" alarms for tsunamis. Public education is invigorated. PTWC injects more scientific information into projecting warnings.
- Oregon - The Program has validated the tsunami issue in Oregon. It has accelerated mapping and product development. There is a comfort level among Oregon communities that they are not isolated from neighboring states' communities as they try to reduce tsunami risk because it can be such a controversial issue within communities dealing with tourism and similar industries. Communities that formerly shunned tsunami issues are now asking for hazard and education signs. Oregon benefits from the multi-state sharing of ideas and multi-state projects. The Program seed money provides products that might not otherwise be developed, and also generates partnerships that allow for transfer of needs and ideas from the local level.
- Washington - Counties are now focused on tsunami issues and feel that it is their own project. Most coastal counties have very scarce resources and without the seed money, may be able to do nothing. No tsunami disaster plans existed a year ago, but they exist now. Counties are now asking for the State and Federal members to work with them on these issues.

Archival Issues

There is great concern about how new and existing products both internal and external to this subcommittee will be archived in an accessible way and several issues were raised.

- What is NOAA's commitment to TIME beyond current and possible future funding?
- When something in a community changes, e.g. dredging a bay, new development, how are those changes in impacts addressed?
- Is redundancy of distribution systems in States a good idea?
- How do we address the loss of key people/agencies/resource center functions?

Four types of archiving were discussed.

- The first is archiving of existing materials.
- Another is archiving of National Program products.
- Archiving for Mitigation Subcommittee' s products.
- Archiving products outside of the Program.

The archival process must allow for accessibility so that items are easily found by anyone needing them. The format must be usable by everyone, and updated on a regular basis, ideally forever.

At a minimum, we must provide an Annual Report with an appropriate format and pictures, etc. This report should include successful case studies. The audience intended to receive this report includes other States, political entities, similar issues groups such as the Hurricane Program and flash flood communities. (Further discussion of these issues occurred during the proposal section of our meeting.)

The Implementation Plan

Lori presented the Implementation Plan and emphasized that it is not specific and it is not what we must do. Rather it is a broad-spectrum framework that addresses the unique character of the States. The Subcommittee felt that the Plan is a good framework, gives direction for States, and can serve as a charter. The Subcommittee adopts the Plan with the provision that minor changes will be discussed with Lori and recommends it to the Steering Committee at this point.

Multi-state Proposals

Five multi-state projects were accepted either to fund or to gather more information on before making a decision to fund.

- The Subcommittee agrees to fund a feasibility study to look at evaluating construction and design issues in areas subjected to strong ground shaking and tsunami inundation and to include domestic and foreign information. (Cost \$20,000.)
- The Subcommittee formed a smaller group to gather more information on a proposal to create a database of tsunami hazards and mitigation citations drawn from a variety of sources and to make it available to the Pacific States and others. If the information gathered by the group is

acceptable, then the Subcommittee agrees to fund this pilot project. (Cost \$28,000.)

- The Subcommittee reviewed a video proposal which will be held for further discussion until more information is received on a video that Eddie Bernard is involved with. The Subcommittee formed a smaller group to gather information, including review comments from others and some Subcommittee members, on a proposal to support some printing costs for a book based on interviews and lessons learned from the 1960 Chilean tsunami. If the information and comments are favorable, then the Subcommittee agrees to fund this proposal. (Cost \$10,000.)
- The Subcommittee agrees to fund a proposal to provide States with mitigation products already developed and available at significant cost savings if bought in bulk. States will detail their needs to DOGAMI. (Cost \$35,000.)
- The Subcommittee formed a smaller group to work out a plan to publish an Annual Report on the Mitigation Subcommittee's activities including case studies of successful products and projects. This report should be of fine quality for distribution to include members of Congress. The plan will include a cost estimate. The Subcommittee agrees that the cost will be covered by the multi-state project fund.

TSUNAMI ACTIVITIES MATRIX
National Tsunami Mitigation Program Subcommittee
April 14, 1998 Meeting
Chris Jonientz-Trisler, Coordinator

	ALASKA	CALIFORNIA	HAWAII	OREGON	WASHINGTON
State Reps	Mike Webb	Rich Eisner, EMD Lori Dengler	Brian Yanagi, EMD Gus Furumoto	Mark Darienzo, EMD	George Crawford, EMD Tim Walsh
Public Info Materials	Public Info Materials	Public Info Materials	Public Info Materials	Public Info Materials	Public Info Materials
Web Pages	In development	developed site to post state/local work group minutes, products, activities	several exist		under development
Evacuation & Educational Signage	procedure in progress to enable installation	developed signs based on Oregon's, now trying to get support to convince Caltrans to post signage - currently unable	In existence on street (evacuation route, all hazards)	Evac and educational signs continue being posted.	Evacuation signs posted, more planned
Media Materials			inventory cancelled	Brochure, bookmarks	
Public Info Products	Brochure exists from 1980s	Brochure developed based on Oregon's. Interpretive programs planned for parks.	Phone book evacuation and safe area maps and instructions exist. State publishes.	Brochure developed in 1990s. Coffee mugs with tsunami logo and tips. Bookmarks, place cards.	Brochure based on California's developed and available where warning signs exist, distributed to hotels. Interpretive signage.
Public Service Announcements			Emergency broadcasts/sirens. Evacuation maps in phone books.		

State Videos			A few	One by OGI and G. Priest. One by Cannon Beach Schools.	
Educational Programs	Educational Programs	Educational Programs	Educational Programs	Educational Programs	Educational Programs
Curriculum Materials			Several	Curriculum activities for K-8 under development.	
Library-type Materials Inventory					
Training Materials and Audiences			Holds exercises.		Recent table top exercise included tsunami.
Public Education				Held dedication ceremonies for several more sign installation sites.	Sending out brochures. Developing ideas to provide materials to hotels/video stores.
Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment	Counties & Communities' Needs Assessment
Counties & Communities' Needs Assessment	Needs assessment info coming from updated survey and community meetings with local officials.	Conference and meetings used to determine recommendations, build constituencies. Recommendations document published following conference.	Drafted Position Paper with recommendations for such things as "Improve forecasting of wave heights on shore."	Finished overall assessment with counties. Will continue to work for priorities.	

Surveys	20-year-old survey exists. Currently surveying about 100 communities for baseline and developing update assessment.	Regional Federal survey done with North Coast responders regarding vulnerability and readiness, 1994.	Historical data: 5 tsunami events.	Regional Federal survey of responders regarding vulnerability and readiness, 1994. Repeating 1997 State Survey done for schools regarding tsunami curriculum and evacuation drills in 1994 and 1997. State inventory of critical facilities done for 47 communities to assess vulnerability.	Regional Federal survey done with responders regarding vulnerability and readiness, 1994.
State/Local/Fed Group	Blue Ribbon Oversight Committee formed to ground-truth data for inundation mapping and meet with local officials to provide type of mapping solutions needed locally. Met with locals in Sitka and Kodiak on issues.	Redwood Coast Tsunami Work Group is a partnership with locals to assess needs and priorities.	Ongoing relationships, new Hawaii Tsunami Group. County level meetings with State and Federal.	State/Local Tsunami Work Group forming to address needs and input from locals.	State/Local Tsunami Mitigation Work Group continues to meet and develop activities and products.
Coastal Jurisdiction Contact	Held meetings in Sitka, Kodiak.	Held conference.	Exist, ongoing.	Planning 2 coastal workshops.	Held several meetings and workshops.

[illegible]

				<p>Developed school certification program to assist schools in developing tsunami plans and evac routes.</p> <p>Working with hotel/motel associations to put materials for guests into rooms.</p>	
1997 Activities	1997 Activities	1997 Activities	1997 Activities	1997 Activities	1997 Activities
1997 Activities	<p>Meetings held to form advisory group for mapping and mitigation efforts. Began update of 20-year-old community survey/risk assessment. Assembling data sets/resources for mapping. Building web page. Exploring sign installation.</p>	<p>Held conference for Redwood Coast Tsunami Work Group. Developed brochure, web site, signs. Published mitigation recommendations document.</p>	<p>Regular meeting county level, state level, state-federal liaison. Drafted Position Paper on Tsunami Issues with priority recommendations.</p>	<p>TIME opened. Developed brochure, bookmark, mugs, hotel/motel materials for public. Forming State/Local partnership. Updated shcool survey to measure progress. Developed school certification program to assist schools with plans/evac routes. Working with motel/hotel associations. Working on tsunami curriculum. Inventoried needs with counties.</p>	<p>Meetings of State/Local/Fed Work Group held to identify local priorities and move forward on signage and brochures. Building web page. Developed brochure, ideas to provide materials to hotels and video stores. Installed signs. Held table top exercise.</p>

1998 Planned Activities	1998 Planned Activities	1998 Planned Activities	1998 Planned Activities	1998 Planned Activities	1998 Planned Activities
1998 Planned Activities	Finalize in-depth survey of 100 communities, develop needs assessment for each and baseline for future work.	Develop guidance for local governments for use of inundation maps and development of evac maps/procedures.	Raise awareness through production of video, reprint of depleted pubs, and support of existing outreach programs of various groups. Support meetings of Hawaii Tsunami Group which provides guidance.	Continue development of State/Local Tsunami Group to include diverse interests. Develop 2 workshops to gather local input and better assess needs/priorities. Work with schools for appropriate evac/destination routes. Continue development/printing of multi-use materials. Print inundation maps for Astoria, Warrenton, Seaside in color.	Support State/Local Tsunami Group. Continue installation of interpretive and evac signs. Support installation of indoor signs in hotels, schools, tourist sites. Coordinate workshops for local officials, businesses, utilities regarding mapping, signage, mitigation. Continue development of educational materials for businesses, schools, residents. Continue development of local county web page including State/Local Work Group meeting minutes, updates to evacuation routes/procedures.